

Supplementary Fig.4. Independent multigroup path and factor-controlled models. Supplementary Figure 4A: Path model of externalizing behavior predicting alcohol use disorder (AUD) criteria; Supplementary Figure 4B: Path model of alcohol consumption predicting AUD criteria; Supplementary Figure 4C: Factor-controlled model of externalizing behavior predicting latent AUD and AUD criteria. Supplementary Figure 4D: Factor-controlled model of alcohol consumption predicting latent AUD and AUD criteria. Multigroup analyses were based on the following age cohorts: young (ages 21-35); middle (ages 36-55); and old (ages 56 and above). Sex and race paths are not pictured. Correlations between AUD criteria are also not pictured. For clarity, dashed lines represent criterion-level paths after accounting for associations with externalizing behavior and alcohol consumption at the latent AUD-level.

Criteria listed in figure are as follows: <u>hazardous use</u> – recurrent alcohol use in physically hazardous situations; <u>social problems</u> –social/interpersonal problems caused or exacerbated by alcohol; <u>role interference</u> –failure to fulfill major role obligations (e.g., work, home) because of alcohol use; <u>larger/longer</u> – alcohol taken in larger amounts or over longer periods; <u>quit/cut down</u> – persistent desire or unsuccessful efforts to cut down alcohol use; <u>time spent</u> – substantial time spent in drinking activities (e.g., using or recovering from alcohol); <u>physical/psych. problems</u> – physical or psychological problems due to alcohol use; <u>give</u> <u>up</u> – important activities given up because of alcohol use; <u>craving</u> – strong desire or urge to use alcohol; <u>tolerance</u> – developing alcohol tolerance; <u>withdrawal</u> – having withdrawal symptoms or using alcohol to avoid withdrawal.